

## Anatomical variant of the risk bile duct during laparoscopic cholecystectomy

### Variante anatómica de la vía biliar de riesgo durante la colecistectomía laparoscópica

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Surgical injuries to the bile duct were increased in the era of laparoscopic cholecystectomy. The anatomical variants of the bile duct, mainly type F, are predisposing to suffer these serious complications. Performing an intraoperative cholangiography can help prevent these types of complications, which is why many authors recommend its systematic use.

The Blumgart classification divides them into A, B, C1, C2, D1, D2, E1, E2 and F (1). The latter is the one that presents the greatest possibility of being injured during a cholecystectomy and is recognized by the mouth of the right posterior sectorial duct at the level of the cystic duct (2).

It has a frequency of about 1%. The case presented belongs to a young patient coordinated for laparoscopic cholecystectomy in which intraoperative cholangiography was performed, highlighting the finding of the F-type anatomical variant (Figure 1). One of the technical aspects described to minimize the possibility of surgical injury to the bile duct is to obtain the critical vision of Strasberg (3) (Figure 2). Surgeons must know these anatomical variants in order to avoid bile duct injuries.

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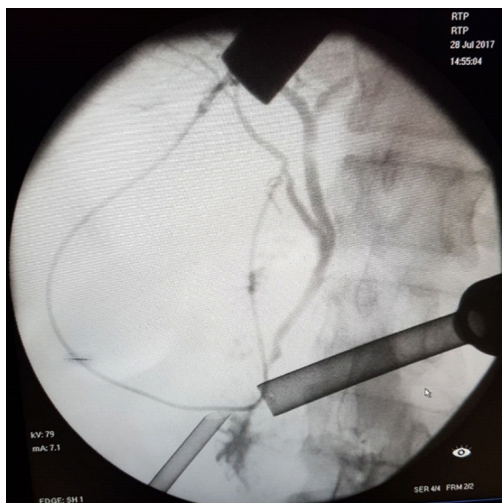
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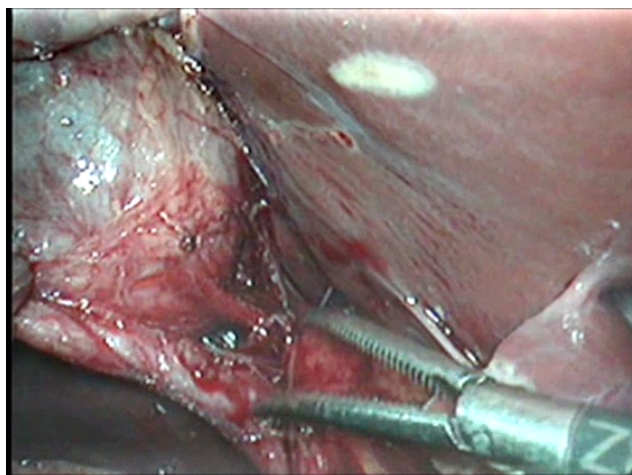
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**Figure 1.** Intraoperative cholangiography showing the anatomical variant of the F-type bile duct of the Blumgart classification. Right posterior sectorial duct leading to the cystic duct (green arrow).



**Figure 2.** Critical view of Strasberg, identifying cystic duct (green arrow) and cystic artery (light blue arrow) prior to clipping of the structures.

#### Authors' contribution

All authors participated in the entire research process.

#### Interest conflict

We declare that we have no conflict of interest.

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